

3D Flash LIDAR All Weather Safety, Phase I

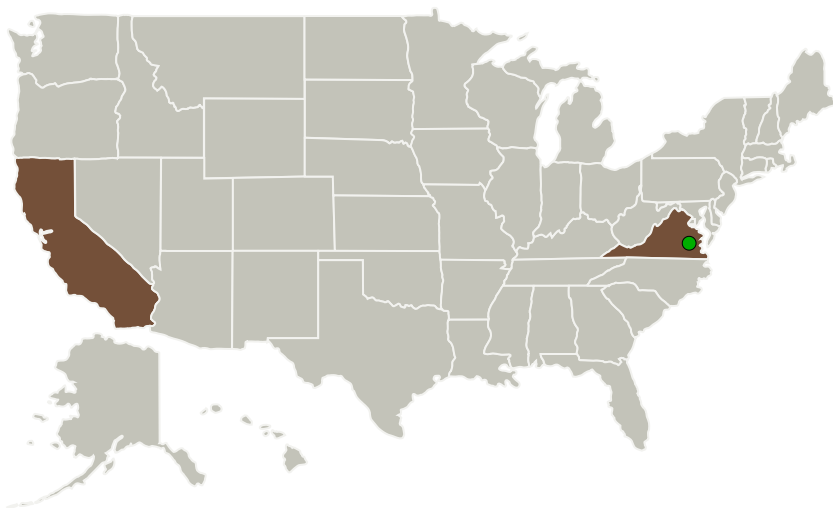
Completed Technology Project (2017 - 2017)



Project Introduction

ASC has tested the LIDAR in diverse weather conditions (rain and fog) and has created landing maps, but has not done the two simultaneously. A number of algorithms for landing site evaluation have been developed, but none of those algorithms have been evaluated for adverse weather conditions. This effort will allow for the acquisition of data and the evaluation of algorithms, so that the architecture for a Phase II prototype can be developed for use in diverse weather conditions.

Primary U.S. Work Locations and Key Partners



3D Flash LIDAR All Weather Safety, Phase I Briefing Chart Image

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Organizations Performing Work	Role	Type	Location
Advanced Scientific Concepts, Inc.	Lead Organization	Industry	Goleta, California
● Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

Primary U.S. Work Locations


California	Virginia
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Project Transitions

 **June 2017:** Project Start

 **December 2017:** Closed out

Closeout Documentation:

- Final Summary Chart(<https://techport.nasa.gov/file/140753>)

Images



Briefing Chart Image

3D Flash LIDAR All Weather Safety,
Phase I Briefing Chart Image
(<https://techport.nasa.gov/image/128518>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Advanced Scientific Concepts, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

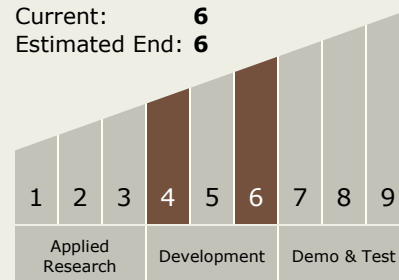
Simon Bill

Technology Maturity (TRL)

Start: 4

Current: 6

Estimated End: 6



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Technology Areas

Primary:

- TX09 Entry, Descent, and Landing
 - └ TX09.4 Vehicle Systems
 - └ TX09.4.7 Guidance, Navigation and Control (GN&C) for EDL

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System